

## **CLAIMS**

**What is claimed is:**

**1. A saddle structure for vehicles, including a saddle, a spongy mass mounted on top of the saddle thereof, and an outer leather layer tightly bounded at the upper surface of the spongy mass thereon; the present invention being characterized by that,**

**--an elastic reinforcing area being preset at the spongy mass therein without in direct contact with the upper surface of the saddle thereof to form an enclosed and elastic empty space there-between;**

**--in practical use, when a rider sits on the saddle thereof, the hipbones and the cleft of the buttocks of the rider are precisely located onto the elastic reinforcing area which is flexibly dented in a radian relative to that of the hipbones to figure a suspended and elastic arc effect thereof without causing any strains or pains to the rider seated at the saddle thereon, fitting to the ergonomics of human body; thus, the rider can sit comfortably on the saddle in long rides or on bumpy roads while the saddle thereof is maintained in proper softness and flexibility with a shock-absorbing effect as well to achieve the best riding condition thereof.**

**2. The saddle structure for vehicles as claimed in Claim 1 wherein the elastic reinforcing area thereof can be preset at the upper surface of the spongy mass thereof.**

**3. The saddle structure for vehicles as claimed in Claim 1 wherein the elastic reinforcing area thereof can also be preset at the bottom surface of the spongy mass thereof.**

**4. The saddle structure for vehicles as claimed in Claim 1 wherein the an elastic reinforcing area of the spongy mass thereof, designed according to the ergonomics, is made up of two annular suspended cavities symmetrically dented at both lateral sides thereon and a linkage support groove to bridge the two suspended cavities at the middle section thereof, properly fitting to the position of the hipbones and the cleft of the buttocks of human body respectively.**

**5. The saddle structure for vehicles as claimed in Claim 1 wherein the saddle can also be equipped with a through rod extending downwards at a preset spot thereof, and a pair of vertical recesses symmetrically cut at the inner wall of the through hole thereon for a locating member and an air bag element with air bags shaped like the elastic reinforcing area thereof to be mounted thereon sequentially.**

**6. The saddle structure for vehicles as claimed in Claim 5 wherein the locating member is provided with a pair of wavy adjustment slots symmetrically defining each lateral side thereon respectively, a tubular sleeve rod protruding at the middle section of one surface thereon, and a pair of locating ribs symmetrically protruding at the outer wall of the sleeve rod thereof.**

**7. The saddle structure for vehicles as claimed in Claim 5 wherein the air bag element thereof, shaped like the elastic reinforcing area of the spongy mass, is made up of two annular air bags symmetrically disposed at both sides thereof, and an inflation zone communicating with the two annular air bags at the middle section thereof; at the center of each annular air bag is disposed a linking support facet having a through hole disposed thereon**

correspondingly matched to an adjusting button; an inflation nozzle and an air release nozzle are protruded at one side of the inflation zone, and an pneumatically-operated inflation valve is matched and joined to the inflation nozzle thereof.

8. The saddle structure for vehicles as claimed in Claim 5 wherein at one side of the inflation zone thereof can be disposed an inflation nozzle having an external threaded section defined at one end thereon to be registered with a threaded fixing hole of a sleeve mouthpiece thereby; at the other inner side of the sleeve mouthpiece is protruded an air release needle valve which is pushed to abut against the inner side of the inflation nozzle thereof to let out the air contained at the air bag element therein.

9. The saddle structure for vehicles as claimed in Claim 5 wherein the inflation zone of the air bag element thereof can also have an inflation nozzle protruding at one side thereon to be correspondingly matched to a needle-like inflation valve.

10. The saddle structure for vehicles as claimed in Claim 5 wherein the air bags of the air bag element thereof can be eccentrically shaped to fit to the position of the hipbones and the size of human body according to the ergonomics.

11. The saddle structure for vehicles as claimed in Claim 5 wherein the air bags of the air bag element thereof can also be made into symmetrical C shapes to fit to the size of the saddle, preventing the air bags from being displaced to the outer side in case of a small saddle thereof.

**12. The saddle structure for vehicles can also be made up of a saddle and an outer leather layer with an air bag element, an elastic support member, and a spongy mass housed there-between wherein the saddle has a through hole properly preset thereon, a pair of annular retaining cavities of proper depth symmetrically dented at both sides of the through hole thereof, and a limiting ring rib protruding at the upper surface of each retaining cavity therein to define a space there-between for an air bag disposed at each lateral side of the air bag element thereof to be located therein; an inflation nozzle is extending downwards at the bottom side of the air bag element to be led through the through hole of the saddle thereof with the air bags thereof protruding at the top of the retaining cavities thereof from the middle section of the upper half thereof; the elastic support element figured like the air bag element is applied to the middle section of the air bag element and engaged therewith at the outer periphery of the air bag element with the upper section of the air bags thereof protruding upwards at the top thereof; the outer leather layer has a triangle-like stop rib defining the front side thereon for the spongy mass of the same shape to be retained therein, a pair of sleeve ribs shaped like the outer periphery of the air bag element protruding at the rear side thereon, and an annular locating rib disposed at the inner side of each sleeve rib therein to define a space there-between for the upper section of each air bag thereof to be adapted therein.**

**13. The saddle structure for vehicles as claimed in Claim 12 wherein the outer leather layer can be made of rubber or plastic materials.**